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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,900	07/22/2003	Yu Jin Choi	CU-3308 RJS	2565
26530	7590	03/21/2006	EXAMINER	
LADAS & PARRY LLP 224 SOUTH MICHIGAN AVENUE SUITE 1600 CHICAGO, IL 60604			XIAO, KE	
			ART UNIT	PAPER NUMBER
			2629	

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/626,900

Applicant(s)

CHOI ET AL.

Examiner

Ke Xiao

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kim (US 2001/0015716).

Regarding **Claim 1**, Kim teaches a method of driving a liquid crystal panel in a dot inversion (Kim, Fig. 6, Pg. 1 paragraph [0001-0002]), the method comprising the steps of:

driving a plurality of dots by dividing them into sets, each set having a voltage polarity and each set including a predetermined number of dots (Kim, Fig. 6a and 10, Pg. 2 paragraphs [0031-0035]);

driving the dots in each set to have a polarity opposite to that of the dots in an adjacent set (Kim, Fig. 6a and 10); and

driving dots in the sets such that a first pair of two adjacent dots have a polarity opposite to a second pair of adjacent dots, the first and second pairs of dots being adjacent to each other (Kim, Fig. 6a and 10, Pg. 2 paragraphs [0031-0035]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 2001/0015716) in view of Furuhashi (US 6,127,995).

Regarding **Claim 2**, Kim fails to teach that the set of RGB dot column include four RGB dot columns in addition to the limitation that adjacent sets must be driven with contrary polarity as per Claim 1. Furuhashi teaches that an inversion scheme can be reverse at any time (Furuhashi, Fig. 17A). Since the applicant does not disclose that having the sets be exactly four RGB dot columns provides an advantage, is used for a particular purpose, or solves a stated problem, it is an obvious matter of design choice to have such a specific number of dot column in a particular set. It would have been obvious to one of ordinary skill in the art at the time of the invention to reverse the polarity scheme at any point, including at every four dot columns, in the display as taught by Furuhashi in the display of Kim in order to further reduce voltage distortion in the signal lines (Furuhashi, Col. 36, lines 13-63).

Regarding **Claim 3**, Kim further teaches that the RGB dot columns are driven in one horizontal line direction in inversion (Kim, Fig. 6a).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US 2001/0015716) in view of Moriyama (US 5,790,092).

Regarding **Claim 4**, Kim fails to teach that the RGB dot columns are driven in two horizontal line directions in inversions. Moriyama teaches driving a LCD in two horizontal line directions in inversion (Moriyama, Fig. 13A-B). It would have been obvious to one of ordinary skill in the art at the time of the invention to add two horizontal line inversion of Moriyama to the display of Kim in order to reduce power dissipation and vertical striping (Moriyama, Col. 7 lines 65-67, Col. 8 lines 1-2).

Response to Arguments

Applicant's arguments filed 16th February 2006 have been fully considered but they are not persuasive.

Regarding **Claims 1 and 3**, the applicant argues that the claimed invention of Kim is not related to the invention in question. For the purposes of prior art rejection an invention need not be claimed in order for it to be considered prior art.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ke Xiao whose telephone number is (571) 272-7776. The examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 13th, 2006 - kx -



SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER